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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,067	12/04/2001	Makoto Kitamura	018976-211	9557

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EXAMINER
NGUYEN, THUKHANH T

ART UNIT	PAPER NUMBER
1722	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/000,067	KITAMURA ET AL.	
	Examiner	Art Unit	
	Thu Khanh T. Nguyen	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-44 and 46-65* is/are pending in the application.

4a) Of the above claim(s) *1-14,20-35,38,40 and 65* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15,36,41,44,46-52,54,55 and 57* is/are rejected.

7)☒ Claim(s) *16-19, 37, 39, 42, 43, 53, 56, 59-64* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 15 is again rejected under 35 U.S.C. 102(b) as being anticipated by Maekawa et al (3,663,147).

Maekawa et al teach a rotary press-molding apparatus, comprising a die (401-417) and punch units (51 and 53) with a plurality of upper and lower punches (201-217 and 301-317) a rotary table (52) or a mold transporting mechanism for transferring the mold between a powder supplying stage, a compressing molding stage, and a molded article extracting around a circumference in a horizontal plane (col. 3, lines 20-28); a compression driving mechanism (61-64) for performing compression molding by driving said upper and lower punch units independently in said compressing molding stage; and linking means (121-123) for detachably linking the plurality of upper and lower punch units to the compression driving mechanism, by moving in a direction orthogonal to the compression driving direction of said upper and lower punch units; fixing means (52, 401-417; col. 3, lines 29-42) for collectively mounting and fixing said die to said die set along with said first and second punches and a unit holding mechanism (51, 53) for holding the punch units while the units are transferred to the next stage.

The apparatus further discloses a charging driving mechanism (82; Fig. 6, 401; col. 3, lines 60-65) for driving the punch units to form a space to be filled with powder in the powder

supply stage; a connecting mechanism (7; 201a-217a; 301a-317a) for connecting the punch units to the charging driving mechanism when the mold is transferred to the powder supply stage, and for releasing the connection of the punch units when the mold is transferred to the next stage; and a unit holding mechanism (51, 53) for holding the punch units while the mold is transferred to the next stage; and a taking-out mechanism for driving the punch units in the formed-product removing stage (10, col. 4, lines 5-14) to take out the formed product; a connecting mechanism (82, 7; 216a, 316a) for connecting the punch units to the taking-out driving mechanism when the mold is transferred to the formed-product removing stage, and for releasing the connection of the punch units when the mold is transferred to the next stage; and a unit holding mechanism (51, 53) for holding the punch units while the mold is transferred to the next stage.

The apparatus also comprises a powder supply means (9) for charging the powder material (8) into the die (401) and a product take-out mechanism (11) for removing the formed product from the die (col. 4, lines 21-23).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 36 and 41, 44, 46, 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa et al (3,663,147) in view of Hudson (4,789,323).

Maekawa et al discloses a tablet forming apparatus as described above, but fail to disclose that the upper and lower punches each has a first and a second section that are individually driven by a cylinder and fastening means for connecting the punches to the driving shaft.

Hudson teaches a ring making apparatus a rotary table (13) for transferring a mold containing a die (16) and a punch units (18, 26) between a powder supply stage (48), a pressing stage (29), and a product removal stage (42; col. 5, lines 6-10); a pressing driving means (12) for driving the punch units at the pressing stage; a charging driving mechanism (48-50); a product take-out mechanism (42); a connecting mechanism (10, 11, 27) for connecting the punch units to the press driving mechanism, the charging driving mechanism, and a product takeout mechanism; a unit holding mechanism (21, 29) for holding the punch units while the units are transferred to the next stage; wherein the punch units each includes a first and second upper punches (31, 34) and a first and second lower punches (23, 26); and actuators (24, 33, 12) for independently driving the punches.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Maekawa et al by providing punch units having a first and second upper punch sections and a first and second lower punch sections that are driven by cylinders as taught by Hudson, because the different punch sections would form a product that have different thickness or having an opening.

5. Claims 36 and 41, 44, 46-52, 54-55 and 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa et al (3,663,147) in view of Schaidl et al (5,049,054).

Maekawa et al disclose a rotary tablet press comprising a plurality of molding units with upper and lower punches movable along with the dies on the rotary table. These references fails to disclose that the upper and lower punches each having a first and second units individually driven by the driving shafts that located on and supported by a single base below the die.

Schaidl et al disclose a multiplate press system, comprising upper punch and lower punches (Fig. 5-6; col. 1, lines 6-12), each punches comprising a plurality of units (36-38) connected to a plurality of die carriers (7, 12, 16) and individually driven by the piston cylinders, or driving shafts (9, 15, 19); wherein all the driving sources and driving shafts are supported by a single base (1) located below the die (3), which is fixed and supported by a frame (1-3); an upper join piece (5) which carries the upper punches is driven by the driving shafts (29, 30) connecting to the lower driving mechanism so that the upper and lower punches could be moved synchronously (col. 4, lines 24-50).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Maekawa by providing a supporting frame and a base plate, a plurality of upper and lower punch units individually and synchronously movable by driving shafts as taught by Schaidl et al, because the multiple punch units would enable the product to be formed with different thickness or having different sections; wherein the synchronized movement of the upper and lower punches would prevent the product from defecting; while the supporting frame and the base would support the punches during the pressing process.

Allowable Subject Matter

6. Claims 16-19, 37, 39, 42-43, 53, 56, and 59-64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 16-19, the prior art fails to teach or suggest a linking means for detachably linking the punch units to the compression driving mechanism, comprising a clamp main unit positioned and fixed on the compression driving mechanism, a sliding claw movably supported on the clamp main unit in an orthogonal direction, and a sliding driving mechanism for driving the sliding claw between a linking position and a non-linking position (Figs. 8-11, 64).

In regard to claim 37, the prior art fail to teach or suggest a second linking means for linking the first and second punches to the die, comprising grooves formed on each of the first and second punch holders extending in the compression direction, engaging pin of the die is engaged with the groove the first punch holder; and engaging pin of the first punch holder is engaged with the groove on the second punch holder (Figs. 24-29; 228c-230c, 232-234).

In regard to claim 39, the prior art fail to teach or suggest a fixing means including an actuator and a pressing member, wherein the actuator presses and fixes the pressing member in between the die to the die set to connect the die and the die set.

In regard to claims 42-43, the prior art fail to teach or suggest a fastening means comprising a hook-shaped claw members erected on pressure ram of the driving shafts, engaging pins fixed on each punch holder of the first and second punches; wherein the fastening means are

configured to fasten the punch holders by engaging the engaging pins with the claw members (Fig. 12).

In regard to claims 53 and 56, the prior art fails to teach or suggest that the driving shafts of each of the punches are ball screws and connected to servomotors by timing belts.

In regard to claims 59-62, the prior art fails to disclose a scarping blade to close off the powder-injecting hole of the powder-storing unit and to scrape away excess powder material outside the powder molding space.

In regard to claim 63, the prior art fails to teach or suggest a tapered portion at an edge of the powder-injecting hole, which is formed at a portion of a bottom wall of a powder-storing unit, so that the tapered portion would fit with a blade tip of a scraping blade.

In regard to claim 64, the prior art fails to teach or suggest that the scraping blade is provided independently from the powder storing unit, passes through a slit formed in the powder storing unit and extends into the powder storing units, and is driven by an actuator disposed outside of the powder storing unit.

Response to Arguments

8. Applicant's arguments with respect to claims 15, 36, 41, 44-52, 54-55, 57-59, 62 have been considered but they are not persuasive.

The applicants have alleged that Maekawa et al ('147) discloses a linking means for linking the upper and lower punch units to the compression driving means, but fails to disclose that the linking means is moving in a direction orthogonal to the compression driving direction of the punches.

Maekawa et al disclose a linking mechanism (121-124, 202a, 209a, 302a, 309a) that connecting the punches (202, 209, 302, & 309) to the compressing driving mechanism (61, 52), in which parts of the linking mechanism (202a, 209a, 302a, 309a) are horizontally rotatable and perpendicular to the vertical compressing force of the punches.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device ***is***, not what a device ***does***." Hewlett- Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (Emphasis in original). In this case, the prior art has disclosed all the structure limitation as described in the current claims including a linking means for linking the punches and the compression driving means. How each structure operates does not differentiate the prior art from the claims. Therefore, the claims are still rejectable over the prior art.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 571-272-1136. The examiner can normally be reached on Monday- Friday, 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin L. Utech can be reached on 571-272-1137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TN

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